

## ABSTRACT

A constant input impedance AC coupling circuit for a current probe measurement system has a resistive-capacitive network that includes a capacitor for coupling the current output signal of a current measurement probe to the low input impedance measurement instrument and the resistive terminating element disposed in the measurement instrument. The resistive-inductive network includes a resistor and a synthesized inductor having a high inductive value, large current carrying capacity and an L/R time constant equal to the RC time constant of the resistive capacitive network. The resistive-inductive network is coupled to the resistive-capacitive network and receives the current output signal from the current measurement probe for terminating DC and low frequency signal components of the current output signal below the low frequency cutoff of the resistive-capacitive network in the same low input impedance of the measurement instrument.